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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,181	04/11/2001	Michael Sandlin	50346-027	8825

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EXAMINER

MCDONALD, RODNEY GLENN

ART UNIT PAPER NUMBER

1753

DATE MAILED: 05/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**Application No.  
**09/832,181**Applicant(s)  
**Sandlin et al.**Examiner  
**Rodney McDonald**Art Unit  
**1753**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Mar 7, 2003
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-26 is/are pending in the application.
- 4a) Of the above, claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_                      6) ☐ Other:

Art Unit: 1753

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. Claims 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 20-23 are indefinite because they are dependent on a non-elected invention. It is believed that these claims are meant to depend from claim 11.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11, 14, 15, 17 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al. (Japan 10-88333)

Saito et al. teach a sputtering target and method for producing a sputtering target. The sputtering target is composed of *finely and homogenously dispersed mixed phases of alloy phases composed of an alloy of one or more kinds of metallic elements among chromium, nickel, tantalum and platinum and the balance cobalt and ceramics phases composed of a compound of at least one kind of element among silicon, aluminum, boron, titanium, and zirconium having affinity to these elements*. As for the method of producing the sputtering

Art Unit: 1753

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target for a high density plane magnetic recording medium, alloy phase alloy powder and ceramics phase powder produced by a *rapid solidifying method are subjected to mechanical alloying to produce alloy powder in which the ceramics phase powder is homogeneously dispersed into the alloy phase alloy powder, which is thereafter compacted by hot press.* (See Abstract)

Examples 4, 5, 7 teach utilizing at least 2 atomic% of Ta and Cr with Pt and Co. (See Machine translation paragraphs 0021, 0023, 0025)

The alloy phase and the ceramic phase are distributed homogenously. (See Machine translation paragraph 0010)

The alloy target can contain cobalt, chromium, tantalum, platinum and boron or cobalt, chromium, platinum and boron. (See Machine translation paragraph 0014)

The alloy composition can be rapidly solidified. (See Machine translation paragraph 0014)

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

Art Unit: 1753

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and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 11-20 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (Japan 10-88333) in view of Takashima (U.S. Pat. 6,406,600).

Saito et al. is discussed above and all is as applies above. (See Saito et al. discussed above)

The differences not yet discussed is the exact composition of the target alloy and the compositional uniformity.

Takashima teach a *CoPt-base sputtering target*. The *CoPt-base sputtering target contains Co as the principal component, Pt as an indispensable element, and at least one element selected from the group consisting of the 4a group elements, 5a group elements, 6a group elements, B and C*. (See abstract)

*A preferred alloy contains 0.1 to 25 atomic % Cr, 0.1 to 20 atomic % Pt. 0.1 to 15 atomic % Ta, and an optional element of 0.1 to 15 atomic % B* because the alloy makes it possible to obtain high recording and reproducing characteristics as the recording layer of a magnetic disk. (Column 6 lines 3-8)

The motivation for selecting a particular composition is that it allows obtaining high recording and reproducing characteristics as the recording layer of a magnetic disk. (Column 6 lines 3-8)

Art Unit: 1753

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As to the compositional uniformity Saito et al. teach that the target is composed of finely and homogenously dispersed phases. Furthermore Saito et al. teach a similar process to produce applicant's claimed target. Therefore Saito et al.'s target must have Applicant's point to point compositional uniformity having a standard deviation in Applicants' claimed range.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Saito et al. by selecting a particular composition as taught by Takashima and a particular uniformity as suggested by Saito et al. because it allows for obtaining high recording and reproducing characteristics as the recording layer of a magnetic disk.

6. Claims 11 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (Japan 10-88333) in view of Bartholomeusz et al. (U.S. Pat. 6,514,358).

Saito et al. is discussed above and all is as applies above. (See Saito et al. discussed above)

The differences between Saito et al. and the present claims is the particular composition.

Bartholomeusz et al. teach a magnetic material for use as a sputtering target. The magnetic material can be a Co based alloy having at least one element selected from the group consisting of Cr, Pt, B, Ta, Ni, Nb, Zr, C, Fe and mixtures thereof. The total content of the element (s) does not exceed 80 atomic %. (Column 3 lines 55-65; Column 5 lines 30-36)

The motivation for utilizing a particular composition of a target is that it allows for depositing a magnetic material having increased PTF and decreased permeability. (Column 3 lines 30-35)

Art Unit: 1753

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Saito et al. by utilizing a particular composition as taught by Bartholomeusz et al. because it allows for depositing a magnetic material having increased PTF and decreased permeability.

***Response to Arguments***

7. Applicant's arguments filed 3-7-03 have been fully considered but they are not persuasive.

***RESPONSE TO ARGUMENTS:***

In response to the arguments that the prior art of record does not teach mechanically alloyed targets, it is argued that the new limitation required by the target product claims of Applicant is taught by newly cited reference to Saito et al. Saito et al. teach mechanically alloying and HIP ing to form sputter targets. Furthermore, Saito et al. teach a homogeneous target. Mechanically alloying was not considered in the previously rejected claims and required that Saito et al. be cited to teach this limitation.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

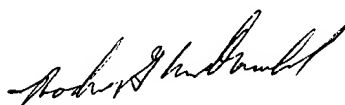
Art Unit: 1753

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney McDonald whose telephone number is 703-308-3807. The examiner can normally be reached on M-Th from 8 to 5:30. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen, can be reached on (703) 308-3322. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



RODNEY G. MCDONALD  
PRIMARY EXAMINER

RM

May 13, 2003